

Listing of Claims

This listing of claims will replace all prior versions and listings of claims in the application.

1. (currently amended) A method for discovery of cooperating nodes in a network of nodes in which each cooperating node has information about at least one other cooperating node, comprising performing, by each cooperating node in the network of nodes, the steps of:

(a) randomly or pseudorandomly selecting, by each a first cooperating node, from cooperating node information available to the first cooperating node, ~~a one~~ second cooperating node;

(b) transmitting from the first cooperating node to the second cooperating node at least a portion of the cooperating node information available to the first node;

(c) periodically repeating steps (a) and (b);

~~whereby in the discovery of all cooperating nodes in the network of nodes are discovered. is within a number of repetitions that is a constant multiplied by the square of the logarithm of the number of cooperating nodes.~~

2. (original) The method of claim 1 wherein step (a) comprises randomly choosing by a first node, from cooperating node information available to the first node, a second node.

3. (original) The method of claim 1 wherein step (a) comprises pseudo-randomly choosing by a first node, from cooperating node information available to the first node, a second node.

4. (canceled)

5. (previously presented) The method of claim 1 wherein step (a) comprises randomly or pseudorandomly choosing by a first node, from cooperating node information stored in the first node, one second node.

6. (amended) The method of claim 1 wherein step (b) further comprises transmitting from the first node to the second node at least a portion of the cooperating node information available to the first node, said cooperating node information comprising a list of cooperating nodes and resources available at each listed cooperating node.

7. (original) The method of claim 1 wherein step (b) comprises transmitting from the first node to the second node at least a portion of the cooperating node information available to the first node, said at least a portion of the cooperating node information comprising all of the first node's cooperating node information.

8. (cancelled).

9. (cancelled).

10. (cancelled).

11. (original) The method of claim 1 further comprising, after step (b) and prior to step (c), the steps of:

(b1) merging, by the second node, the cooperating node information transmitted by the first node with cooperating node information available to the second node;

and wherein step (c) comprises periodically repeating steps (a), (b), and (b 1).

12. (original) The method of claim 1 further comprising, after step (b) and prior to step (c), the steps of:

(b1) requesting, by the first node, from the second node, at least a portion of the cooperating node information available to the second node;

(b2) receiving, by the first node, from the second node, at least a portion of the cooperating node information available to the second node;

and wherein step (c) comprises periodically repeating steps (a), (b), (b1), d (b2).

13. (original) The method of claim 1 further comprising, after step (b) and prior to step (c), the steps of:

(b1) merging, by the second node, the cooperating node information transmitted by the first node with cooperating node information available to the second node;

(b2) requesting, by the first node, from the selected cooperating node, at least a portion of the cooperating node information available to the second node;

(b3) receiving, by the first node, from the selected cooperating node, at least a portion of the cooperating node information available to the second node;

(b4) merging, by the first node, the cooperating node information transmitted by the second node with cooperating node information available to the first node;

and wherein step (c) comprises periodically repeating steps (a), (b), (b 1), (b2), (b3), and (b4).

14. (currently amended) A system of cooperating nodes in which each cooperating node can discover information about the other cooperating nodes, comprising network nodes, wherein each of the said network nodes comprises:

a selector for randomly or pseudorandomly selecting, from cooperating node information available to the node, one a-second cooperating node;

a transmitter for transmitting from the first cooperating node to the second cooperating node at least a portion of the cooperating node information available to the first node; and

a timer control for periodically triggering the selector and the transmitter;

~~whereby in discovery by operation of the system enables each cooperating node to discover of all cooperating nodes in the network, of nodes within a number of triggerings that is a constant multiplied by the square of the logarithm of the number of cooperating nodes.~~

15. (currently amended) A method for discovery of cooperating nodes in a network of nodes in which each cooperating node has information about at least one other cooperating node, comprising performing, by each cooperating node in the network of nodes, the steps of:

(a) randomly or pseudorandomly selecting, by ~~a each~~ first cooperating node, from cooperating node information available to the first cooperating node, a second cooperating node;

(b) requesting, by the first cooperating node, from the second cooperating node, at least a portion of the cooperating node information available to the second node;

(c) receiving, by the first cooperating node, from the second cooperating node, at least a portion of the cooperating node information available to the second node;

(d) periodically repeating steps (a), (b), and (c);

~~whereby in discovery of all cooperating nodes in the network of nodes are discovered. is within a number of repetitions that is a constant multiplied by the square of the logarithm of the number of cooperating nodes.~~

16. (original) The method of claim 15 wherein step (a) comprises randomly choosing by a first node, from cooperating node information available to the first node, a second cooperating node.

17. (original) The method of claim 15 wherein step (a) comprises pseudo-randomly choosing by a first node, from cooperating node information available to the first node, a second node.

18. (cancelled)

19. (previously presented) The method of claim 15 wherein step (a) comprises randomly or pseudorandomly choosing by a first node, from cooperating node information stored in the first node, one cooperating node.

20. (currently amended) The method of claim 15 wherein step (b) further comprises requesting, by the first node, from the second node, at least a portion of the cooperating node information available to the second node, said cooperating node information comprising a list of cooperating nodes and resources available at each listed cooperating node.

21. (original) The method of claim 15 wherein step (b) comprises requesting, by the first node, from the second node, at least a portion of the cooperating node information available to the second node, said at least a portion of the cooperating node information comprising all of the second node's cooperating node information.

22. (original) The method of claim 15 wherein step (d) comprises periodically repeating steps (a), (b), and (c) by each of the cooperating nodes.

23. (cancelled)

24. (cancelled)

25. (previously presented) The method of claim 15 further comprising, after step (c) and prior to step (d), the step of:

(c 1) merging, by the first node, the received cooperating node information with cooperating node information available to the first node;

and wherein step (c) comprises periodically repeating steps (a), (b), (cl) and (c).

26. (original) The method of claim 15, further comprising, before step (d) the step of:

(aa) transmitting from the first node to the second node, at least a portion of the cooperating node information available to the first node;

and wherein step (d) comprises periodically repeating steps (aa), (a), (b), and (c).

27. (previously presented) The method of claim 26 further comprising, after step (aa), the step of:

(bb) merging, by the second node, the cooperating node information transmitted by the first node with cooperating node information available to the second node;

and wherein step (d) comprises periodically repeating steps (aa), (bb), (a), (b) and (c).